

LISTING OF CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1 through 38. (Cancelled)

Claim 39. (Previously presented) A device for making quantified determinations of ~~the quality~~ characteristic parameters of a surface, the characteristic parameters being selected from the group consisting of gloss, haze, and distinctness of image, comprising:

at least one optical system having:

~~a light diode aligned at a first predetermined angle to the surface, said light diode emitting an emitted light at the surface so that said emitted light hits the surface at a predetermined angle of incidence, said emitted light having a light intensity over the entire visible spectral range;~~

a lens parallelizing said emitted light before said emitted light hits the surface;

~~[[a]] at least one photo sensor aligned at a second predetermined angle to receiving a reflected light from the surface at a predetermined angle of reflection, said photo sensor generating a signal based on [[a]] said reflected light from the surface, wherein said predetermined angle of incidence and said predetermined angle of reflection are mirror symmetrical to each other with respect to the surface;~~

~~[[a]] filter means arranged in a light path between said light diode and said surface for adjusting said emitted light to an aggregate of daylight spectrum and eye sensitivity or nightlight spectrum and eye sensitivity and/or a filter arranged between said light diode and said photo sensor for adjusting said reflected light~~ said at least one photo sensor and for

adapting a spectrum such that an aggregate spectrum of said light diode, said at least one photo sensor, and said filter means corresponds to an aggregate of daylight spectrum and eye sensitivity; and

~~a lens for parallelizing said emitted light that impinges on said surface;~~

a lens for focusing said reflected light into a light beam, wherein said light beam impinges on said at least one photo sensor; and

~~a controller configured to derive at least one characteristic of the surface based on said signal~~ evaluation means for determining the gloss, haze and distinctness of image of the surface based on said signal, said signal corresponding to portions of said reflected light.

40-44. (Cancelled).

45. (Previously presented) The device according to claim 39, further comprising a plurality of photo sensors arranged adjacent to one another.

46. (Previously presented) The device according to claim 39, wherein at least a portion of said emitted light comprises a light pattern.

47. (Previously presented) The device according to claim 46, wherein said light pattern comprises at least one light/dark edge.

48. (Previously presented) The device according to claim 46, wherein said light pattern is a pattern selected from the group consisting of a grid form, a cross-mesh form, an ellipse form, and a circular form.

49. (Currently amended) The device according to claim 39, ~~further comprising a light source aligned at a predetermined angle to the surface, said light source emitting an additional light at the surface~~ wherein said at least one optical system comprises three optical systems, and wherein said predetermined angle of incidence and reflection is different for each of said three optical systems.

50. (Currently amended) The device according to claim 49, wherein said predetermined angles of incidence and reflection ~~[[is an]] angles~~ selected from the group consisting of 0°, 10°, 15°, 20°, 30°, 45°, 60°, 75°, 80°, and 85°.

51. (Previously presented) The device according to claim 39, wherein said emitted light comprises at least one light strip.

52. (Currently amended) The device according to claim 39, further comprising a temperature device for determining a temperature of each of said light diode and said at least one photo sensor so that a temperature-corrected determination of ~~said at least one~~ characteristic parameters can be made.

53. (Previously presented) The device according to claim 39, further comprising a measurement wheel positionable on the surface to maintain a constant spacing therefrom during movement of the device relative to the surface.

54. (Currently amended) The device according to claim 39, wherein said at least one photo sensor comprises at least three photo sensitive elements.

55. (Previously presented) The device according to claim 39, further comprising a measurement cycle of less than 0.2 seconds.

56. (Currently amended) A method for making quantified determinations of the ~~[[quality]]~~ gloss, haze, and distinctness of image of a surface, comprising the steps of:
~~aligning a light diode at a first predetermined angle to the surface;~~
controlling ~~[[said]]~~ a light diode to emit an emitted light ~~in the visible spectrum~~ at the surface so that said emitted light hits the surface at a predetermined angle of incidence, said emitted light having a light intensity over the entire visible spectral range;
parallelizing said emitted light before said emitted light hits the surface;
focusing a reflected light that is reflected from the surface along a predetermined angle of reflection into a light beam having an aggregate spectrum, wherein said angle of incidence and said angle of reflection are mirror symmetrical with respect to the surface;
~~[[aligning]]~~ arranging a photo sensor ~~at a second predetermined angle to the surface so that said light beam impinges onto said photo sensor receives a reflected light from the surface;~~
controlling said photo sensor to detect said ~~reflected~~ light beam and to emit an electrical measurement signal based on said ~~reflected~~ light beam;
arranging a filter means in a light path between said light diode and said photo sensor, said filter means filtering said emitted light and/or said reflected light so that an aggregate spectra corresponds to an aggregate of daylight spectrum and eye sensitivity ~~or to an aggregate of nightlight spectrum and eye sensitivity;~~
~~parallelizing said emitted light before said emitted light impinges on said surface;~~
~~focusing said reflected light on said photo sensor; and~~
~~determining at least one characteristic of the surface~~ the gloss, haze, and distinctness of image based on said signal, said signal corresponding to portions of said reflected light.

57. (Currently amended) The method according to claim 56, wherein determining ~~said at least one characteristic~~ the gloss, haze, and distinctness of image comprises a measurement cycle of less than 0.2 seconds.

58. (Cancelled).
59. (Cancelled).
60. (Previously presented) The method according to claim 56, further comprising arranging a plurality of photo sensors adjacent to one another.
61. (Previously presented) The method according to claim 56, further comprising causing at least a portion of said emitted light to comprise a light pattern.
62. (Previously presented) The method according to claim 61, wherein said light pattern comprises at least one light/dark edge.
63. (Previously presented) The method according to claim 61, wherein said light pattern is a pattern selected from the group consisting of a grid form, a cross-mesh form, an ellipse form, and a circular form.
64. (Previously presented) The method according to claim 56, further comprising causing relative movement between said light diode and said photo sensor and the surface.
65. (Previously presented) The device according to claim 39, wherein said light diode comprises a light emitting member, said light emitting member having a precisely defined position within the light diode, wherein said precisely defined position does not vary over time.
66. (Currently amended) The device according to claim 39, wherein said ~~first predetermined~~ angle of incidence does not vary over time.

67. (Previously presented) The method according to claim 56, wherein said light diode comprises a light emitting member, said light emitting member having a precisely defined position within the light diode, wherein said precisely defined position does not vary over time.

68. (Currently amended) The method according to claim 56, wherein said ~~first predetermined~~ angle of incidence does not vary over time.

69. (Previously presented) The device according to claim 39, further comprising a scatter disk arrangement positioned with respect to said light diode so that said emitted light homogeneously illuminates the surface.

70. (Previously presented) The method according to claim 56, further comprising positioning a scatter disk arrangement with respect to said light diode so that said emitted light homogeneously illuminates the surface.

71. (New) The device according to claim 49, wherein said three optical systems are arranged in such a way that all three of said three optical systems essentially illuminate the same measurement point.

72. (New) The method according to claim 56, further comprising:
controlling a second light diode to emit a second emitted light at the surface so that said second emitted light hits the surface at a second predetermined angle of incidence, said second emitted light having a light intensity over the entire visible spectral range, said second predetermined angle of incidence being different from said predetermined angle of incidence;

parallelizing said second emitted light before said second emitted light hits the surface;

focusing a second reflected light that is reflected from the surface along a second predetermined angle of reflection into a second light beam having an aggregate spectrum, wherein said second angle of incidence and said second angle of reflection

are mirror symmetrical with respect to the surface, said second predetermined angle of reflection being different from said predetermined angle of reflection;

arranging a second photo sensor so that said second light beam impinges onto said second photo sensor;

controlling said second photo sensor to detect said second light beam and to emit a second electrical signal based on said second light beam;

arranging a second filter means in a second light path between said second light diode and said second photo sensor, said second filter means filtering said second emitted light and/or said second reflected light so that an aggregate spectra corresponds to an aggregate of daylight spectrum and eye sensitivity; and

determining the gloss, haze, and distinctness of image based on said signal and said second signal.